

SELECTED FACTORS AFFECTING RANGELAND USE
ON THE WARM SPRINGS INDIAN RESERVATION

by

ROBERT KUHLEN

A RESEARCH PAPER

submitted to

THE DEPARTMENT OF GEOGRAPHY

in partial fulfillment of
the requirements for the
degree of

MASTER OF SCIENCE

September 1982

Directed by
Dr. Philip Jackson

TABLE OF CONTENTS

| | |
|---|----|
| List of Figures | iv |
| INTRODUCTION | 1 |
| METHODOLOGY | 5 |
| HISTORICAL GEOGRAPHY OF RANGELAND USE | 8 |
| CULTURAL BACKGROUND | 8 |
| Introduction of the Horse | 10 |
| HISTORICAL BACKGROUND | 13 |
| Establishment of the Warm Springs Reservation | 13 |
| Early Reservation Land Use | 14 |
| Livestock on the Range | 18 |
| Early Settlement Pattern | 20 |
| The General Allotment Act | 21 |
| Indian Reorganization Act | 23 |
| Shift in Resource Use | 25 |
| Planning for Resource Use | 25 |
| INSTITUTIONAL ASPECTS OF RANGE MANAGEMENT | 27 |
| BUREAU OF INDIAN AFFAIRS | 28 |
| Land Operations Branch | 29 |
| Realty Branch | 30 |
| TRIBAL ORGANIZATION | 30 |
| Range Units | 33 |
| Tribal Committees | 33 |
| Natural Resources Department | 36 |
| Police Department | 36 |
| Planning Department | 37 |
| Extension Service | 37 |
| CONCLUSION | 40 |
| FOOTNOTES | 44 |



ACKNOWLEDGEMENT

I wish to thank the following people who have contributed to the formulation of this paper: Clint Jacks and Jacob Frank of the Warm Springs Extension Office; Dean Elliott of the Bureau of Indian Affairs Land Operations Branch, Warm Springs; Dan Newman, Bureau of Indian Affairs Realty Branch, Warm Springs; Jack Hunt and Dean Eggleston, Bureau of Indian Affairs Area Office, Portland; Ray Rangila and Rudy Clements, Planning Department, Warm Springs; members of the Range Committee, especially Cy Katchia and Biff Johnson; Dr. William Robbins, Department of History, Oregon State University; Keith Clark, Department of History, Central Oregon Community College; and a special thank you to Darlene Martin for her conscientious and careful typing.

Finally, I wish to thank the members of my committee, Dr. Richard Highsmith and Dr. James Pease, and especially Dr. Philip Jackson, for their patience and attention.

LIST OF FIGURES

| | | |
|--------|---|----|
| Fig. 1 | The Warm Springs Indian Reservation in north central Oregon. | 2 |
| Fig. 2 | Major land resource areas. | 4 |
| Fig. 3 | Grazing districts. | 34 |
| Fig. 4 | Central nervous system of range management. | 36 |

SELECTED FACTORS AFFECTING RANGELAND USE ON THE WARM SPRINGS INDIAN RESERVATION

ABSTRACT: The rangelands of the Warm Springs Indian Reservation represent a major resource within a definitive geographic area. The utilization of this resource is affected by a number of factors, some of which are examined here. The cultural evolution of the Warm Springs people has resulted in the horse maintaining a prominent place in tribal life. Other aspects of the historical geography of rangeland use include pertinent federal legislation. The peculiar administrative structure that exists on the reservation today for making the decisions necessary for the on-going utilization of the rangeland resource is then outlined.

INTRODUCTION

As the result of a treaty signed over one hundred and twenty-five years ago, scattered Indian bands of north central Oregon were gathered together and placed on a reservation situated between the Deschutes River and the crest of the Cascade Mountains (Fig. 1). Although they possessed somewhat similar economies, these bands varied culturally, in some cases even to the point of belonging to separate linguistic groups. Some of the bands were semi-nomadic hunters and gatherers; others were more sedentary, with a riverine way of life based on the great Columbia fishery. Once ordered to the confines of the reservation, however, the various tribes were forced to gain a livelihood by utilizing the resources found

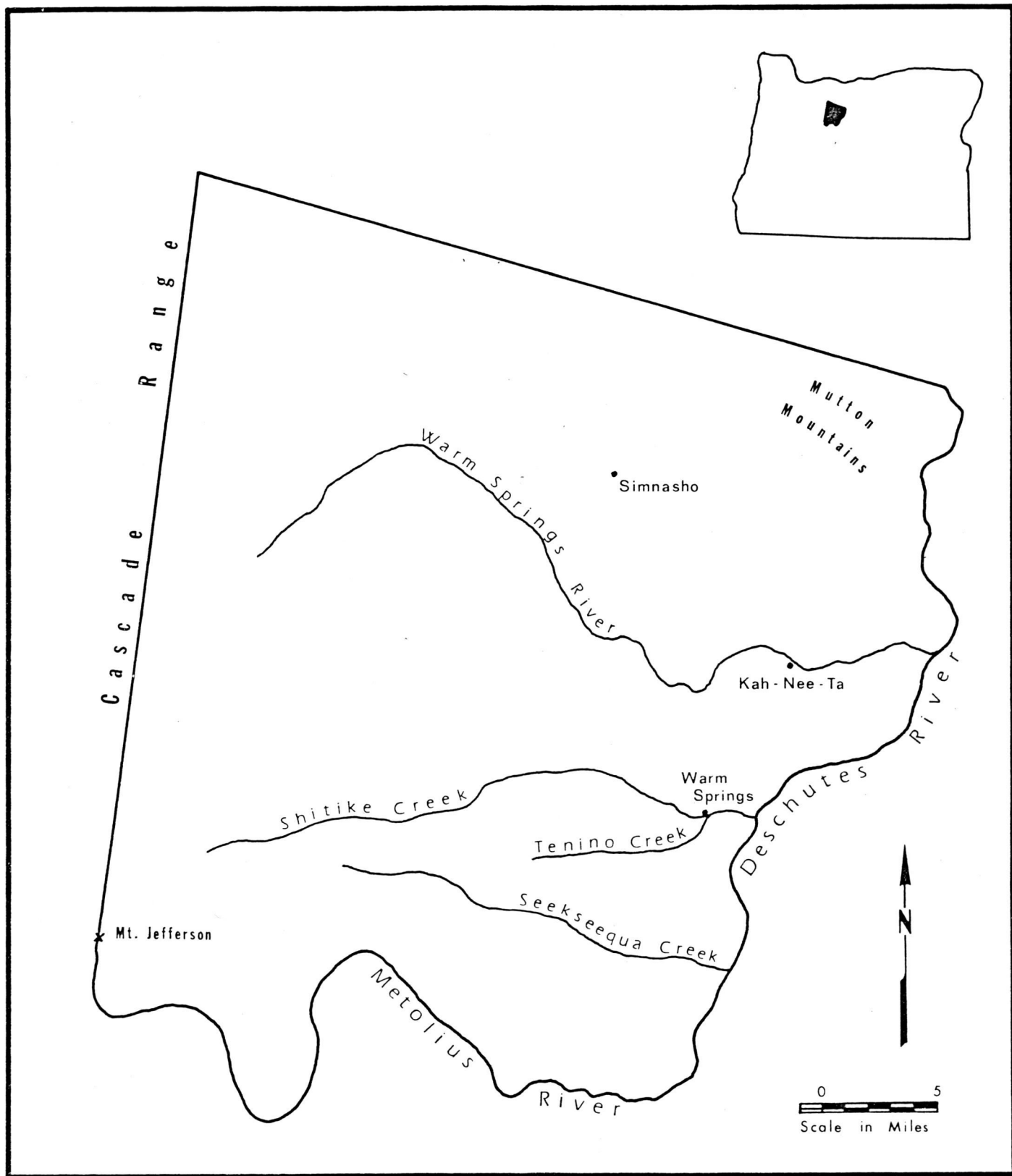


FIG. 1 The Warm Springs Indian Reservation
in north central Oregon.

within its borders. Known today as the Confederated Tribes of the Warm Springs Reservation, these people have learned how to assimilate to their advantage the necessary resource converting techniques of the white culture, even while striving to maintain a distinct cultural identity. This study examines several factors affecting the use and development of a major class of land found on the reservation (Fig. 2).

Much of the utilization of the Warm Springs range resource has centered on the grazing of domestic livestock. How a confederation of fishing and hunting and gathering societies came to be pastoralists is the focus of the first part of this paper. The process of acculturation is a gradual and incremental one, and attempted adoptions of alien cultural traits often meet with mixed success. The historical geography of rangeland use on the Warm Springs reservation needs must begin off-reservation, and well before its establishment. Specifically, the diffusion of the horse into the original territory of the Warm Springs tribes will be charted; it will be seen how the adoption of this animal has affected subsequent land use activities on the present day reservation. The evolution of other rangeland uses, such as dry-farming operations, will also be considered.

A crucial element affecting the utilization of rangeland resources is the question of who sets the policy, and who, then, is charged with carrying it out. As Marion Clawson has noted:¹

Much of the world's rangeland is held in group or communal tenures-tribe or village, not individual. Under such circumstances, rangeland use is, at least in part, a group decision.

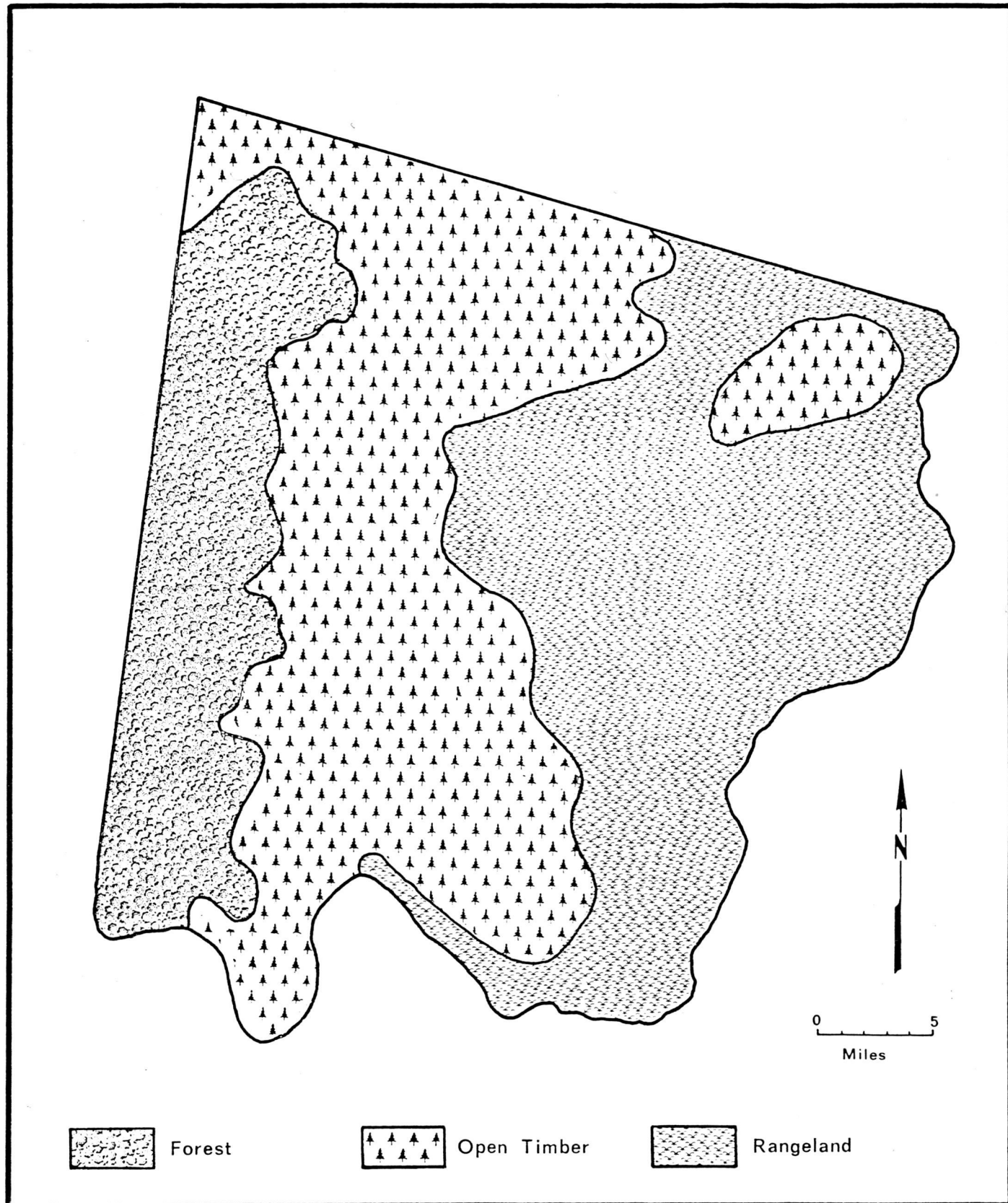


FIG. 2 Major land resource areas.

Up until recently, a full scale "tragedy of the commons" existed, whereby families who wished to run livestock simply turned them out on the open range. The open range here, of course, was not so open. Unlike the public domain (or at least popular perceptions of it), reservation rangeland had fixed and finite boundaries, and a limit to the number of animals that it could support and still maintain itself as a renewable resource. The ability of the Warm Springs range to supply ample forage on a yearly basis was taken for granted long ago. It is now in a state of marked deterioration. The second half of this paper looks at attempts being made to rectify these past mistakes, and examines the role of each member within the range management mechanism.

METHODOLOGY

The research for this study was conducted during a three month stay on the reservation - April, May, and June of 1981. The author at that time was involved with community resource development aspects of the Oregon State University Extension program at Warm Springs, particularly the educational and tribal member involvement activities surrounding the preparation of the Tribes' Comprehensive Plan. Files of the Extension Service, tribal Planning and Natural Resources Departments, and the Bureau of Indian Affairs Land Operations Branch were kindly made available to me. More important, however, were the numerous meetings I was invited to attend, during which many of the problems of rangeland use, past and present, were openly discussed.

The methodology employed in this paper will be a narrative presentation and analysis of certain factors affecting the use of rangeland on the reservation. As such, it follows the mode of descriptive geography, one of the discipline's traditional approaches to spatial problems.

More than a few geographers have dealt with American Indians and the reservation as a geographic phenomenon, although several of these have called attention to the general lack of studies dealing with the Indian in the geographical canon. Hans noted that while there was increasing interest in the "original American and in his past accomplishments, ... the geographer remains indifferent."² From the perspective of teaching comes Donald J. Ballas' "Geography and the American Indian," in which he states that "American Indians and their reservations offer opportunities for study in virtually all of the systematic fields of geography."³ In a short bibliographical article, Carlson lists a total of 95 entries which "reveal the nature of the research, as well as the lack of research, on certain aspects of the American Indian."⁴ Clearly the most noteworthy studies concerning the reservation are those by Imre Sutton, whose *Indian Land Tenure* is required reading for any geographer attempting to focus on Indian land and resource use, and who has stated elsewhere that "Everything points to the Indian reservation as a distinctive place, both as a geographical entity and as a semi-autonomous enclave."⁵

Similar in theme to the present study is an unpublished master's thesis out of Arizona State University: "Raiders to Ranchers: The Historical Geography of the Arizona Apache Adoption of Cattle" by Michel Ludwig Hasse, which traces the establishment of grazing districts and the evolution of a tribal herd. Closer to home is a senior thesis presented to this department by Joseph Sonnenfeld, entitled "Development of the Resources of the Warm Springs Indian Reservation." Finally, an excellent summary of some of the issues surrounding resource use on the reservation is found in Jack Hunt's article "Land Tenure and Economic Development on the Warm Springs Indian Reservation."⁶

The use of rangeland on the Warm Springs Indian Reservation, then, is a problem of resource utilization. It is a problem of social, economic, and cultural choice within a fixed geographic area, an area wherein exists a complex tenure situation, and an even more complex decision-making structure. I hope to have pointed out that such a problem is proper grist for a geographer's mill, and that only by examining some of the individual components can any progress be made toward complete understanding. It is not a pure and simple matter of too little forage for livestock. What we are dealing with here is the relationship of a particular group of people to a major part of their environment, and the evolution of that relationship from its involuntary beginnings to the present. And what is offered here is a geographer's perspective. Such a perspective can contribute greatly toward attempts at finding a solution to this or any other problem of resource management.

HISTORICAL GEOGRAPHY OF RANGELAND USE

If the object is to define and understand human associations as areal growths, we must find out how they and their distributions (settlements) and their activities (land use) came to be what they are. Modes of living and winning a livelihood from their land involves knowing both the ways (culture traits) they discovered for themselves and those they acquired from other culture groups.

- Carl O. Sauer

CULTURAL BACKGROUND

The Warm Springs reservation was not established until 1855, when pressures from increasing white settlement in north central Oregon persuaded Indian leaders to give up most of their homeland in return for a refuge that would remain free from the greedy onslaught. The various bands that would later become known as the Confederated Tribes of Warm Springs were basically members of two distinct culture groups which interfaced at the great trading center where the Columbia River forced its way through basaltic narrows - later to be named The Dalles. These two groups - Chinook and Sahaptin - spoke different languages and had different customs, though they possessed similar economies and generally enjoyed good relations. In this area the Chinook peoples comprised several bands of the Wasco tribe: the Ki-gal-twal-la, the Dalles, and the Dog River; while the Sahaptins were represented by several bands of the Walla Walla: the Tygh, Wyam, Tenino, and Dock Spus. Although the Walla Walla were more like the Wasco than the other Sahaptin

tribes to the east - the Cayuse and Nez Perce - they nevertheless retained a distinct cultural identity. Upon removal to the reservation the Walla Walla bands became known simply as the Warm Springs tribe. A third tribe - the Paiutes - arrived on the reservation some time after its establishment.

Both the Wasco and Warm Springs people depended for subsistence on the great salmon runs of the Columbia and its tributaries, though to a different degree.

Practically all the tribes of this region ... depended to a greater or less extent on salmon, which was the principal food of those living on the Columbia. The preparation of dried and pounded salmon near The Dalles was common to both the Sahaptian and Chinookan tribes. Roots were also important, especially camas, and formed the staple food among some tribes. Berries, lichen, and bark were also used, especially by the tribes near the mountains.⁷

By all accounts, the Wasco were more a riverine culture, only occasionally leaving their settlements in search of roots or berries, and rarely to hunt wild game. "The Wascos apparently preferred a relatively sedentary life spent close to the river even in the off season."⁸

The Warm Springs (Walla Walla) bands exhibited more of the hunting and gathering culture traits, utilizing the fish only when readily available. They ranged over a broader territory, claiming as their hunting grounds an area extending some 45 - 50 miles south of the Columbia up the John Day and Deschutes drainages.

The two groups would meet at The Dalles to engage in trading, an activity which may have served to reinforce the differing cultural bias in earning a livelihood.

Groups from the west traded wappato roots and trade beads with the Wasco for dried root cakes, pounded salmon, and beargrass for basket making. The Tenino and other Sahaptin groups traded meat, roots and berries for preserved fish and European trade items. This trade set-up of the Wasco and Tenino could very well explain why the Wasco were sedentary, depending mainly on fish, and why the Tenino were transitory, preferring hunting to fishing.⁹

Introduction of the Horse

Some time before initial contact with whites, perhaps 40 or 50 years prior to the Lewis and Clark expedition, there occurred a major cultural event that would not only immediately affect the lives of these tribes, but would have serious and long-lasting impact on the resources available to them once confined to the reservation. Although the actual date that the horse first made its appearance among these people differs according to the source consulted, there is no question that this animal was quickly adopted and integrated as a cultural element of great significance. John C. Ewers credits Francis Haines with dispelling an earlier belief that the diffusion of the horse among the indigenous population of North America was the result of animals "lost or abandoned by the Spanish exploring expeditions led by DeSoto and Coronado in 1541."¹⁰ Haines gathered enough evidence to suggest that "the Plains Indians began acquiring horses some time after 1600, the center of distribution being Santa Fe."¹¹ He further considers the movement of the horse into the intermountain plateaus of the Northwest to be a separate route of diffusion. As Ewers writes:

Haines has postulated a route of diffusion west of the Continental Divide from Santa De to the Snake River by way of the headwaters of the Colorado, the Grand, and Green Rivers. This was the most direct route to the Northwest from New Mexico. There was little incentive to divert horses westward from that route, as the Great Basin afforded inadequate pasturage for horses.¹²

While some historians consider the horse to have arrived in the Northwest as early as 1650, we must again turn to Haines for the most realistic estimate. "Haines, interpolating from historical data, sets the date of introduction at 1690-1700 for the Shoshone, 1710-1720 for the Flathead, and about 1730 for Nez Perce and other Sahaptin groups."¹³ Judging from this and other sources, it seems the horse finally made it to the region around The Dalles between 1730 and 1750. Its arrival was hardly welcome at the time, however. "The Warm Springs Indians had no horses until they obtained them from the invading Snakes."¹⁴ The Shoshonean marauders during this period actually displaced several tribes of the region, including the Yakima and Klickitat, the Tenino, and the Molalla, who originally inhabited the eastern slopes of the Cascades. At the beginning of the 19th century, on their return trip Lewis and Clark found The Dalles nearly deserted. "The scarcity of settlements on the south bank (of the Columbia) must be attributed in this region to fear of Snake raids."¹⁵ As Lewis and Clark moved eastward from The Dalles, "they found horses more plentiful, indicating that The Dalles was near the northwestern limit of horse diffusion at that time (1805)."¹⁶

Once having acquired the horse, however, the Warm Springs bands enjoyed the same advantage as the Snakes. "Sometime in the early 19th century it seems that the fortunes of war turned against the Snake raiders ... the result was a return of the Sahaptin speaking peoples south of the Columbia River, where they reoccupied some of their former territory."¹⁷

Equality in war was only one advantage of acquiring the horse.

The animal expanded the scope and range of trading, both as a trade item and as a means of transportation ... It intensified hunting by facilitating transportation of bulky items such as meat, horns, and skins and by permitting the mounted hunting of some game.¹⁸

More importantly, perhaps, the horse quickly became a measurement of wealth, particularly among the Sahaptins.

In 1846, among the Nez Perce and Cayuse even "private families" had as many as 1500 horses. In 1853, a Wallawalla chief owned over 2000 horses. Such figures suggest that reports of herds of thousands of horses, "vast numbers", and "immense herds" are not exaggerated.¹⁹

The cultural differences between the Chinookan Wasco and the Sahaptin Warm Springs were further made manifest in the degree to which the two groups adopted the horse. The Sahaptin culture rapidly evolved from primitive hunting and gathering into horse pastoralism. The Chinook people, on the other hand, were less dramatically affected. "The Coville, Wishram, Wasco, and Wyam had adequate grazing grounds for horses and used the animal for transportation and as a commodity in trade; but they were sedentary fisherman and traders, rather than pastoralists."²⁰ The overall importance of the horse as an

adopted culture trait cannot be stressed enough. The consequences of its adoption contribute in no small way to the resource problems experienced on the reservation today.

HISTORICAL BACKGROUND

Changes came to the region around The Dalles soon after the Lewis and Clark expedition reported their findings. A Hudson's Bay Company post was established there in 1820: Methodist and Catholic missions followed. It was already an important stopping point along the Oregon Trail by the time the Fremont expedition arrived in the early 1840's. The Indians of the area were content to continue their fishing at Celilo Falls and for the most part took advantage of the new trade opportunities. A few of them learned rudimentary agriculture from observing the techniques used by the white settlers in growing gardens. There are records of "Wascos in the vicinity of The Dalles cultivating small patches of land."²¹ As the tide of immigration grew stronger with each year, however, the native people understandably began to show increasing resentment and fear that their homeland would soon be overrun by these pushy aliens. It was this fear, and the realization that they were on the receiving end of inevitable changes, which led to the treaty of 1855.

Establishment of the Warm Springs Reservation

With the signing of the 1855 treaty, the Indians of Middle Oregon relinquished title to the vast area that was their traditional homeland in return for a reservation to the

south and the sum of 150,000 dollars. The area that was to be their new home was known to some of the Indians from hunting forays, although they never occupied it for any length of time. An 1834 expedition led by Nathaniel J. Wyeth crossed what is now the reservation along a north-south trail, "finding an occasional Indian hunting camp and trading with the natives for supplies of meat."²² Wyeth found south of Seekseequa Creek "a lodge of Indians who have 32 horses ... traded one of them and the promise of trading two more in the morning."²³ Other than using the area to hunt game or to pick berries, the Indians did not consider the future reservation to be particularly resource rich from their standpoint. During the treaty hearings, one chief stated: "The place that you have mentioned I have not seen. There is no Indians or white men there yet, and that is the reason I say I know nothing about that country. If there were Indians and whites there, then I would think it was good country."²⁴ A letter sent to Washington, D.C. by Joel Palmer, the Oregon Superintendent of Indian Affairs and principal architect of the treaty, points to more specific dissatisfaction: "The Indians seriously objected to the district on account of the small quantity of agricultural lands, many of them having adopted the habits of the whites and being engaged in farming to a considerable extent."²⁵ Thus, while there was feeling among the tribal leaders that they were getting the short end of this deal, they were also aware that it was probably the best they could hope for at the time.

Early Reservation Land Use

Once the Warm Springs reservation was created, the means

of livelihood for its new residents was the primary concern for both the Indians themselves and the government that had placed them there. It became a question of how to best utilize the reservation's limited resources. At the same time, government policies were aimed at making sure the Indians would stay put, for new settlers were already moving into the tribes' former territory. Modification of the old ways was imminent. As one writer put it, "It was necessary to transform them from hunters and food gatherers, to agricultural producers."²⁶ Hence, early resource converting techniques on the reservation were focused on farming. But even marginal farmland was hard to find.

Because of the altitude, the region was subject to frosts which damaged crops; also the rain and snowfall was light, and the porous soil made some form of irrigation necessary. Consequently, all the farms were crowded onto narrow creek bottoms in rock-bound canyons. High water washed away some of the best land, forcing the farmers into the uplands. Not until this occurred did the Indians discover that some of the tablelands were excellent for raising grain.²⁷

The Agency was established 2 miles west of the Deschutes River where Tenino Creek joined Shitlike Creek, an area that offered the largest available bottomland acreage for those crucial first attempts at agriculture. This is the part of the reservation where many of the Wasco people settled, a tribe that was quick to embrace agriculture as a new way of life. "The Wascos had more desire and were willing to engage in farming operations."²⁸ One writer suggests that the reason for this apparently smooth transition was basically cultural:

"The Wascos had become farmers and were willing to follow the sedentary life on the reservation as they had done for so many years at the river."²⁹

Not all the Indians were willing to adapt so quickly to the ways of the whites, however. Many of the Sahaptin people settled in the "North End", that part of the reservation north of the Warm Springs River. Here was the abundant bunch grass necessary for the maintenance of their horse herds as well as timbered areas which provided habitat for the deer and other game that these tribes hunted. It will be remembered that the Sahaptin culture was more involved with hunting than fishing, and that these Indians adopted the horse quite readily, reinforcing their nomadic existence. They continued to depend on hunting for subsistence, but soon realized the finite geographic conditions of reservation life, and began to adjust accordingly. In an early letter, agent John Smith commented that one segment of the Tygh tribe "have no farms under cultivation, but they appear to be undergoing a change, as they express a willingness and desire to cultivate farms. Their unsuccessfulness in hunting last season has caused them to search for a different source from which to derive the means of subsistence."³⁰ In the same letter he notes that another group of Tyghs "are now living at the mouth of the Warm Springs River. They have one small farm which is owned and cultivated by them jointly ... they wish to break up fifty acres of new land for the enlargement of their farm the coming season."³¹

There were many problems associated with early farming efforts on the reservation. Perhaps foremost was the inability of the government to supply the people with the proper supplies and implements. Seed was hard to come by; the plows that were sent were not designed for working the rocky soils. Other tools were scarce or inadequate, and the Indian farmers often had to wait their turn to use them. Weather frequently played an adverse role. Frost could come at any time of the year, further discouraging the already tenuous commitment of these people to working the soil. Grasshoppers were a cyclic curse, especially in the North End.

Certainly one of the most terrifying impediments to early agricultural progress on the reservation were the depredations of the Snake Indians. This tribe inhabited the central and southeastern portions of Oregon and northern Nevada; at this time, they were still a non treaty tribe. They were the traditional enemies of the Warm Springs tribes, and they took advantage of the easy pickings that were to be had at the new reservation. The Snakes raided the agency on numerous occasions, burning buildings and running off stock, sometimes stealing hundreds of animals at a time. They were finally induced to a more peaceful mode of existence, and placed on the Yakima reservation. Many of them eventually left there and ended up at Warm Springs, where they settled primarily in the "South End" of the reservation.

Traditional ways of earning a livelihood are the essence of a culture, and are not easily discarded. A majority of the Indians living on the reservation would travel north to

fish in the old places each year, a practice which did little to help ensure a successful harvest from their new lands.

" The distance of the fisheries from the reservation necessitated the removal of the entire family to the fishing stations along the river, where the Indians remained during the entire summer, neglecting their crops which they left to the mercy of the wild weeds."³²

All in all, these early attempts at farming were less than encouraging to the Indian people on the reservation. Even government officials were soon realizing the limits of the land they were dealing with. A visiting Commissioner of Indian Affairs would write in 1871: "A much smaller number of white men would find it difficult to sustain themselves by cultivating the soil of the Warm Springs reservation, and certainly the Indians never can sustain themselves without resorting to fishing, hunting, and gathering roots and berries."³³ About that same time, A.B. Meachem, Oregon Superintendent of Indian Affairs commented that "Warm Springs as an agricultural country is a total failure. The only way the people can ever become self-supporting will be as stock raisers."³⁴

Livestock on the Range

When the people of Warm Springs brought their wealth of horses to the new reservation, these horses were turned out on the "open range" to graze where they pleased. The herds became quite accustomed to fending for themselves, and quickly multiplied, much to the delight of their owners. The market value of these horses was rather low; this con-

tributed to escalating numbers since few animals were ever removed from the range. The importance of the horse in the cultural evolution of the Warm Springs people has already been discussed. There is little wonder in the fact that reservation rangelands were soon being abused by these animals. But recognition of carrying capacity comes late in the saga of a society engulfed and overwhelmed by the final tide of manifest destiny. The Warm Springs Indians required horses to sustain the chances of keeping alive that which made them different from the settlers who were rapidly bringing "civilization" to the old homelands. But with the realization that the vast majority of reservation land would never respond to the plow, these Indians were forced into becoming cowboys.

Even before the establishment of the Warm Springs reservation, many of the tribes of the intermountain region were acquiring cattle.

Before 1842 the Indians east of the Cascades undoubtedly received most of their cattle from missionaries in that part of the country. It was the desire of the missionaries to turn the Indians from their nomadic habits to a settled way of life sustained by agricultural pursuits.³⁵

While apparently initiated by the missionary zeal to convert heathens, cattle raising was an activity that the Indians themselves would soon see certain advantages in taking up. For the Indians living in the vicinity of The Dalles, Oliphant relates that "during the 1840's they rapidly increased their holdings of cattle, partly by trading in the Willamette Valley, but principally, it appears, by trading Indian horses

for American cows to the increasing number of overland immigrants."³⁶

It is not known for certain if the Indians brought substantial numbers of cattle to the new reservation. There is strong likelihood, however, that at least some of the families owned herds at that time. Billy Chinook was an Indian guide for the Fremont expedition that passed through central Oregon in the mid 1840's. An early history of the area notes that "he arrived at The Dalles in 1851, as we supposed returning from his trip east with Fremont. He came by way of California, bringing a California Indian wife, and quite a large band of Texas and Mexican cattle. He removed with the other Indians to the Warm Springs reservation and ended his days there."³⁷

While large numbers of cattle may not have been on the reservation from the beginning, it wasn't long before their importance was recognized. After the realization that what they were dealing with was rangeland best suited to grazing livestock, the Agency officials got busy. "High grade Devon and Hereford cattle were introduced into the reservation herds ... and the Indians were urged to raise and breed cattle."³⁸ Along with the new emphasis on stock raising rather than farming as a livelihood, the type of crops that were planted underwent a radical change. Instead of wheat, Indian farmers were now raising hay to ensure adequate feed for their stock through the winter.

Early Settlement Pattern

Although much of the population resided in the area

surrounding the Agency on Shitlike Creek, many Indians preferred to live in what amounted to a rather dispersed settlement pattern. This was the reason for agent John Smith lamenting the poor attendance at school: "Half of the Indians on this reservation are located so far from the schoolhouse that it is impossible for their children to attend school. When they commenced putting in their spring crops the number of daily scholars was reduced to three."³⁹

Some of the Indians lived to the south of the Agency, this being where the majority of the Paiutes settled once they arrived on the reservation. Many more, especially the Warm Springs tribe, preferred the intermingled plains and woodlands of the North End, and Simnasho "soon became the northern center of population on the reservation."⁴⁰ The semi-dispersed settlement pattern was soon to be amplified by a piece of legislation ultimately aimed at eroding what little land rights remained with the native population of the continent.

The General Allotment Act

The General Allotment Law of 1887, otherwise known as the Dawes Act, was passed by Congress ostensibly with the premise that it would "civilize" the Indian and protect his landholdings. But even the House Indian Affairs Committee could see through that:

The real aim of this bill is to get at the Indian lands and open them up to settlement. The provisions for the apparent benefit of the Indian are but the pretext to get at his lands and occupy them.⁴¹

The law provided for the survey of all Indian reservations,

the allotment of tracts of land to each tribal member, and the disposal of all remaining lands to the general public. This was supposed to allow the Indian to enter the mainstream of the dominant society through the ownership of private property and the sense of responsibility which was thought to accompany such ownership. In reality it led to the virtual demise of more than one reservation, and to increasing poverty and loss of cultural identity for many Indians.

The effects on Warm Springs, fortunately, were not quite as drastic. As required by the law, reservation lands were allotted. "During the summer of 1887 John A. McQuinn was employed three months in surveying the boundaries of the Warm Springs reservation, and subdividing it into farms."⁴² This resulted in spreading out the population even more than it already was. In 1888, the agent "allotted land to all the Indians living south of the Warm Springs River. This comprised nearly all the Wascos, Teninos, and Paiutes. He made but few allotments north of that river where most of the Warm Springs and John Day tribes resided, because at that time the northern boundary line was not fully decided upon."⁴³

There were very few lands that passed to white ownership on the reservation, due to the fact that what was left after allotment was sub-marginal farmland, and because much of the public domain in the area was still open to claims. Even so, the Dawes Act was the beginning of many problems for the Warm Springs reservation. It created a condition that plagues efficient land use on the reservation today: the fractionated heirship status of some of the best agricultural

lands. While a full scale treatment of the complicated tenure situation lies outside the scope of this paper, it is clearly an issue that comes up in any discussion dealing with the reservation's land resources. It would take 47 years and another act of Congress to give tribal leaders the tool they needed to secure the future for the people of Warm Springs.

Indian Reorganization Act

The Indian Reorganization Act (IRA) of 1934 was a piece of enabling legislation which allowed each reservation to establish and maintain a form of home rule. By a majority vote of tribal members, the reservation could set up a constitution and by-laws for the purpose of exercising self-government. As our historian put it, "The IRA of 1934 was a frank admission that the United States had made a mistake in 1887."⁴⁴

The Warm Springs reservation wasted no time in utilizing the IRA - their constitution and by-laws were adopted in 1937. A tribal council was established which had the vested power "to prohibit the overgrazing of lands or other depletion of the capital or natural resources of the tribe."⁴⁵ This was the first attempt at recognizing the reservation's rangelands for what they are: a resource to be used as a privilege, not a right. Article VIII of the new constitution and by-laws did not mince words in setting the record straight regarding tribal lands:

The unallotted lands of the Warm Springs reservation, and all lands which may hereafter be acquired by the Confederated Tribes of the Warm Springs Reservation,

or by the United States in trust for the Confederated Tribes of the Warm Springs Reservation, shall be held as tribal land, and no part of such land shall be mortgaged or sold. Tribal lands shall not be allotted to individuals, but may be assigned to members of the Confederated Tribes, or leased, or otherwise used by the Confederated Tribes as hereinafter provided.⁴⁶

Not only was the Dawes Act no longer in effect, but the very plainly spelled out policy of the Tribes was now aimed toward consolidation of common lands and resources, and the cohesion and solidarity of a people.

The shift in management of the reservation's resources was not absolute. The federal government still maintained the offering of what they considered a helping hand. There were certain mandates that still had to be followed within the Department of the Interior, but the definition of that all too vague "trust" relationship started to change. Indians began to learn the self-confidence required for effective management.

During the Roosevelt administration the Indian Service (later the BIA) under John Collier published a small monthly magazine entitled *Indians at Work*, which provided a forum for the new spirit of Indian leadership by highlighting and publicizing various tribal activities. The following excerpt from an article on Warm Springs indicates that tribal leaders realized how important the rangelands were:

Cattle raising is the principal occupation of the Warm Springs Indians, there being 3,767 head of beef cattle on the reservation. The Indians have formed their own cattle association and are attempting to increase their

herds, improve the breed and better the grazing lands.⁴⁷

Shift in Resource Use

Soon after the passage of the Indian Reorganization Act the Confederated Tribes began to develop their vast timber resource. While this put the reservation squarely on the road to economic prosperity, it caused a definite change in resource management priorities. The woods now offered lucrative employment opportunities, and the establishment of the Warm Springs Forest Products Industries allowed lumbering to become the leading source of income. This, along with the tenure pattern and the trend toward larger farms and ranches, has helped to bring about the so-called "hobby ranching" that typifies many of the livestock operations existing on the reservation today. The Indian rancher often does not have to make his living from his livestock - there are other options. There is no real incentive to optimize production. When a livestock owner does wish to expand his operation, he may be met with the resistance of the many part-time ranchers with whom he shares the range. The situation has evolved to a point where the use of rangeland is locked up by too many people who run not enough animals each.

Planning for Resource Use

As the Confederated Tribes entered the second half of the twentieth century they increasingly became aware of the need for making sure that their resources were used wisely. This need became even more apparent when their traditional

fishing grounds at Celilo Falls were inundated by the reservoir forming behind the newly constructed dam at The Dalles. With the loss, both real and symbolic, of this aspect of culture and livelihood, it became crucial for the Tribes to utilize the reservation's resources in a way that could sustain them now and into the future. They used some of the money paid in compensation for the loss of their fishing grounds to finance a study by Oregon State College (now OSU) which focused on the natural and human resources of the reservation. Still an important source of information, the OSC report recommended certain changes in the way resource allocation decisions were being made at Warm Springs, and helped to set up the mechanism whereby resource use could be monitored and controlled.

In the late 1960's, the Tribes went even further. They developed a Comprehensive Plan for the reservation which was to be the overall policy guide for land use and resource utilization. This plan is now (1981) in the process of being updated, with a greater level of detail. The use of rangeland on the reservation is a key element in the revised Comprehensive Plan, and the policy guidelines that are set forth will ensure for the future a more careful stewardship of this important tribal resource.

INSTITUTIONAL ASPECTS OF RANGE MANAGEMENT

Everyone has a "steak" in the range.

- Anon.

Any system of resource use includes as necessary components the user and the decision maker or manager. In the case of private ownership, they are simply one and the same. With publicly owned resources, the user becomes the various public interest groups who have a stake in that resource, while the decision makers are hired professionals with the responsibility of managing the resource for the greatest public good. On an Indian reservation, the components become tangled in a web of bureaucratic mandates and an historically malleable interpretation of the concept that Indian lands are to be held "in trust."

The use of rangeland on the Warm Springs Indian Reservation is a resource system the evolution of which parallels the historical development of much of the region's rangelands. An article by Galbraith and Anderson points out that "the history of grazing seems to have followed a similar pattern throughout the world. First, an abundance of native forage - one of the greatest natural resources available to man - then deterioration or loss of that resource, followed by efforts for rehabilitation."⁴⁸ The people of Warm Springs are moving towards efforts at rehabilitating this major land resource on the reservation. The following section of the paper will look at the institutional structure whereby this process is taking place, and will outline the

roles played by each member within the range management mechanism.

BUREAU OF INDIAN AFFAIRS

Simply stated, the Bureau of Indian Affairs is charged with managing all Indian lands and resources held in trust by the United States. In the case of grazing use of rangelands, the Indian Service realized many years ago that serious degradation of the resource was the case on many reservations. In 1932 a report entitled "An Economic Survey of the Range Resources and Grazing Activities on Indian Reservations" was presented to a Senate sub-committee. In the words of one former government official, "it constituted the first comprehensive effort to obtain fundamental data as to the area and condition of Indian grazing lands and as to the use that was being made of such lands. It was a start toward controlled grazing on Indian lands."⁴⁹ A permit system was developed in order to keep track of the actual use being made of rangelands, and to ensure that stocking rates were held within the carrying capacity of the range. There was much opposition to this on the part of Indian livestock owners who had become accustomed to the free and open use of this tribal resource.

In attempting to manage the range resource, the Bureau is directed by the Code of Federal Regulations, Title 25, Part 151, wherein is stated that "the Secretary of the Interior is directed to ... restrict the number of livestock

grazed on Indian range units to the estimated carrying capacity of such ranges, and to promulgate such other rules and regulations as may be necessary to protect the range from deterioration."⁵⁰ But there is also the stipulation that grazing regulations administered by the Bureau apply to all government lands on a reservation "except as superseded ... by provisions of any tribal constitution, by-laws, or charter, heretofore duly ratified or approved, or by any tribal actions authorized thereunder."⁵¹ As we shall discover, the Tribal Council of Warm Springs has indeed passed several ordinances dealing with the use of rangeland. Thus, the BIA's role has been regulated to that of providing technical assistance. The source of this assistance on Warm Springs is the Bureau's Branch of Land Operations.

Land Operations Branch

Within this arm of the Bureau is a full-time range conservationist who has the responsibility of working with Indian livestock operators to develop a range management plan for their particular range unit. Despite the increasing emphasis on Indian self-determination within the Bureau, all range units must be established following certain federal regulations, and must be properly recognized and approved by the Superintendent of the reservation. Only then can a grazing permit be issued by the Tribal Council, qualifying that range unit for technical assistance as well as cost-sharing range improvements. On the reservation at the present time, only three out of a possible eight range units have been formally recognized by the Bureau.

Realty Branch

As mentioned previously, tenure plays no small part in the problem of reservation rangeland use. The Realty Branch of the Bureau is charged with keeping tabs on the tenure situation of reservation lands. Although tribal land on Warm Springs is not open to allotment, there is widespread use of agricultural assignments. Any landless tribal member may apply to the Realty office for an assignment, or lease, of land, the limit of which is 160 acres. Since most of the good farmland was taken by allotments long ago, leases are now made on tribal rangelands. The Realty Office processes the application and presents it to the Tribal Council, who in turn must approve it by resolution. Few applications are ever turned down. Upon approval, the applicant has the right, and the obligation, to use the land until his death, at which time the land reverts back to tribal status. Tribal Council has the responsibility to revoke a lease because of non-use; however, this has never happened. There are now over 12,000 acres in leases, and a substantial amount of leased land sits idle.

TRIBAL ORGANIZATION

There are several departments and functions within the Tribal administrative structure at Warm Springs that have direct dealings with how the rangelands are used and managed. Foremost among them are the various ordinances adopted by Tribal Council.

In 1945, Ordinance 15 was passed, which regulated to

some degree the grazing use of range. Section 1 states "that all livestock belonging to, and bearing the brand of a locally enrolled Warm Springs Indian, shall be grazed upon the common ranges of the reservation without grazing fees or other charge of any nature." Furthermore, Section 3 holds that "it is not contemplated that non-Indian livestock will be permitted on the reservation under any circumstances."

One result of the 1960 Report by Oregon State College was the adoption of Ordinance 31. In rather strong wording, the ordinance required the procurement of grazing permits for all livestock on the range. It also called for the payment of grazing fees "for the *privelege* of grazing livestock on the Warm Springs Reservation" (*italics added*). This was a significant turning point in the attempted regulation of rangeland use. Attempted, because the measure proved to be highly unpopular, and no fees were ever collected, nor was trespass ever enforced.

As an indication of the particular importances of horses in the scheme of things at Warm Springs, Ordinance 43 was adopted "to regulate the rounding up of horses on the reservation and the rides employed for such purpose." It outlined the procedures for selecting a ride boss within each district, who "shall have full and complete authority and control over all riders" during horse round-ups. The ordinance further calls for "two annual rides for the purpose of rounding up, branding and selling horses."

Ordinance 48, adopted in 1971, is entitled "Range Management Ordinance" and supersedes Ordinance 37. This ordinance outlines the manner "under which management of rangelands will be carried out consistent with the Comprehensive Plan." This is a clear reference to the tribal position that all natural resource planning and management activities on the reservation be coordinated with the general policies formulated in the Comprehensive Plan. Ordinance 48 sets forth the procedure for establishing range units and for the issuing of permits to livestock operators within organized range units. A more politically and culturally feasible phasing in of grazing fees is ordered, with no fees being collected for the first five years of a grazing permit. Article V stipulates that "the Tribal Range Committee will determine priority of range rehabilitation and improvements on range units."

In addition to these ordinances, there are a pair of tribal resolutions that have direct bearing upon reservation rangeland use by their recognition of the local leadership implicit in the rideboss system. Resolutions 5200 and 5500 call for the establishment of the Northend ridebosses "to provide leadership on Northend district for livestockmen as they utilize the reservation's grazing resource for stock, and to see that the resource is used in such a manner that it maintains its productivity on a renewable basis." Cattle ride bosses as well as horse ride bosses are now delegated the authority to carry out a number of duties relating to the use of rangeland in the Northend; and the system is meant to

serve as a model for other districts having difficulty organizing as range units. Provisions are included in Resolution 5500 which call for close cooperation and coordination with BIA Land Operations and Tribal Natural Resources Department in regulating grazing use to within carrying capacity, maintaining fences and other range improvements, and conducting round-ups. The final clause of the resolution emphasizes the notion that "the responsibility of livestock rests upon the owners, and that active participation is required for rides, work days, work assignments, feeding and taking care of livestock in an acceptable manner."

Range Units

General areas for grazing a particular owner's livestock are largely determined by "customary use." These customary use areas are currently in the process of organizing as range units, which entails the formal establishment of boundaries, and the issuance of a grazing permit. There are eight such districts on the reservation (Fig.3). As range units, each area will have its own detailed range management plan. While certain segments of the boundaries between some of the range units are in question, there exists the potential for a high degree of cooperation. Mutton Mountain and Log Springs, for example, have more or less consolidated for range management purposes as the Northend.

Tribal Committees

The committee structure came about as another result of recommendations in the 1960 Report by Oregon State College concerned with bringing greater efficiency to the management

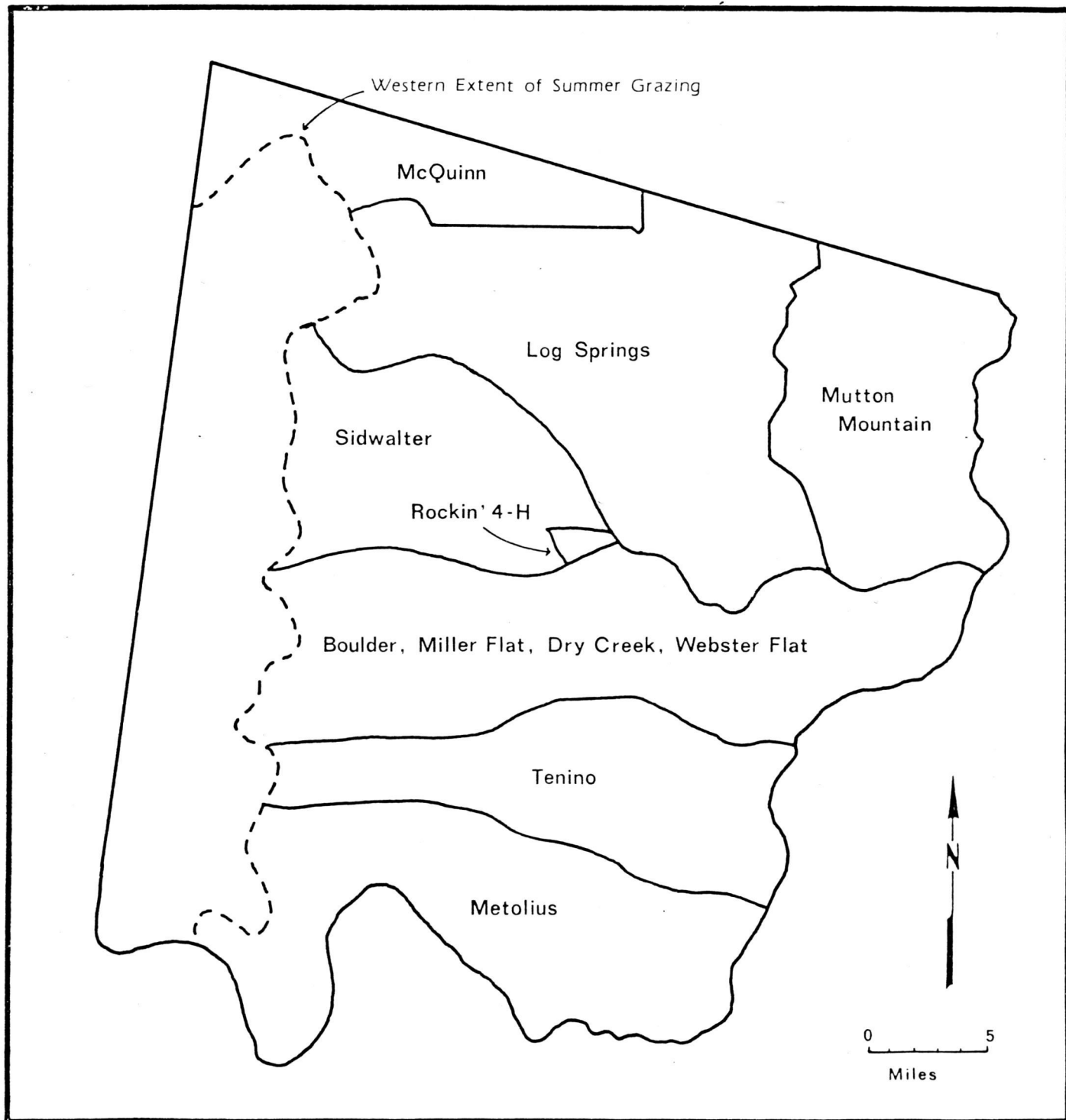


FIG. 3 Grazing districts.

of tribal resources. There are two tribal committees that have responsibilities directly pertaining to the use and rehabilitation of rangeland.

The Land Use Committee functions as the reservation's equivalent of a local planning commission. It works closely with the Planning Department in reviewing all land use and land development proposals on the reservation. It holds public hearings and takes action on conditional use permits, new housing locations, and, as a recent example, the siting of a new livestock holding corral that was necessary for the Tribe's program aimed at controlling and eradicating equine infectious anemia.

The Range Committee has a number of responsibilities. They include the following: 1) determines priority of range rehabilitation and improvements on range units; 2) inspects range, farmland, and all improvements such as fences and water sources to determine condition; and 3) makes reviews and recommendations to Tribal Council concerning range ordinances, range law enforcement, and any projects utilizing the resources of the range. The Range Committee maintains an informal working relationship with the local district leadership and with the technical and support staff, and acts as a liaison between those groups and Tribal Council. This relationship is the central nervous system of range management on the reservation (Fig. 4).

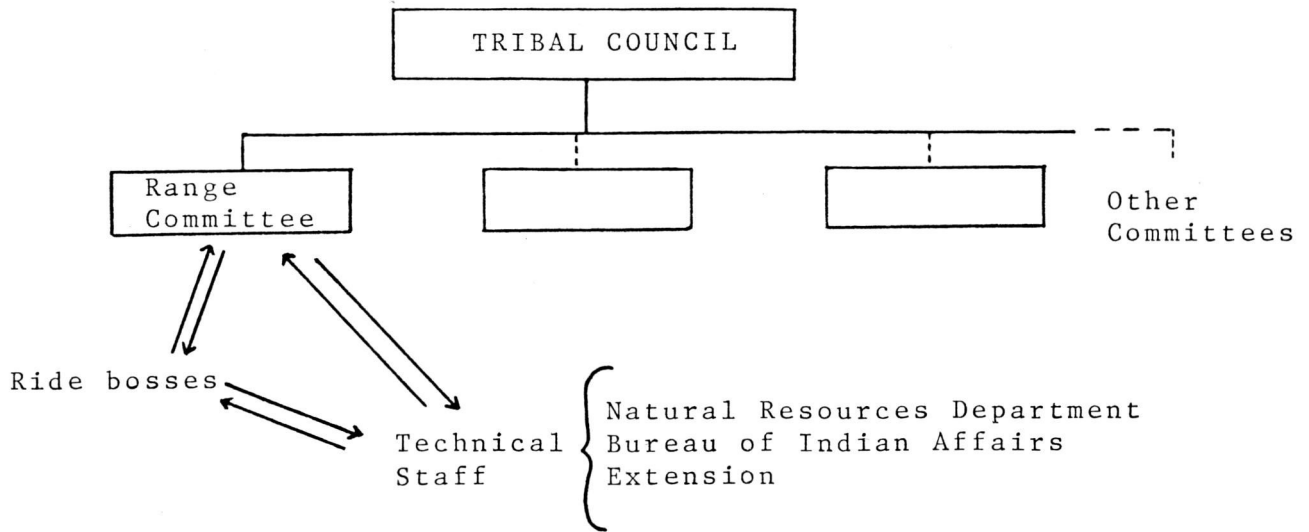


FIG. 4 Central nervous system of range management.

Natural Resources Department

Within this tribal department are four Conservation Technicians who have the responsibility of monitoring natural resources, keeping records, and generally working closely with the ride bosses during round-ups and any other time livestock are bought and sold. They also help to see that the range is not abused by overstocking, and that proper seasonal distribution of animals takes place. To a certain extent, the Conservation Technicians are responsible for enforcement of trespass violations and other infractions of tribal range management ordinances. But in this area their effectiveness is extremely limited, as they have no arresting powers and may only issue citations.

Police Department

The Police Department employs several Game and Range officers to enforce tribal ordinances covering these fields. Their duties are now primarily focused on game laws, but as

the necessity for range management and strict control over grazing becomes clear to tribal members, enforcement of range ordinances will receive more attention. The Chief of Police at Warm Springs maintains the position that responsibility for enforcement of all tribal laws and ordinances rests solely with the Police Department.⁵²

Planning Department

Tribal Planning is charged with the formulation and periodic revision of the Tribes' Comprehensive Plan. The Plan may be viewed as an overall policy umbrella which provides guidelines and direction for more specific plans developed in compliance with it. The Planning Department also coordinates capital improvement programs such as utilities construction or expansion, provides technical support to the Land Use Committee in reviewing land use proposals, and generally tries to match the reality of life on the reservation with tribal goals and aspirations. In the past the focus has mainly been on human resources and more or less urban and residential development, since this was where the need was greatest. Now, because of the recognition by the Tribes that coordinated resource management planning is essential to the wise and efficient use of reservation lands, the Planning Department will provide the tie that binds, as it were, to the unified approach of all resource management on the rangelands.

Extension Service

The Extension Service plays a vital role in the use of rangeland on the Warm Springs Reservation. Proper range management can only come about when each livestock operator

understands the principles involved, and is ready to cooperate fully in their application. Extension is responsible for carrying out educational programs in range management, for disseminating technical information, and for working at the individual level with livestock owners to help solve their particular problems. Furthermore, the Extension Office at Warm Springs insists on coordination among those responsible for planning and management of the reservation's resources. As outlined in the *Warm Springs Extension Long Range Report*, of the programs in the two categories of Natural Resource Coordination and Range Management, all are considered top priority. They include the following: continue to develop resource coordination committee; develop "test" area for resource coordination; assist in developing strong organizational leadership structures within grazing groups; work in cooperation with Natural Resources and Land Operations to obtain basic range information; and assist in developing land bases and wintering areas.

In 1958, the Extension Service along with BIA Land Operations organized the Rockin' 4-H Club, in which young people could learn with their peers the techniques and inner workings of a range livestock operation. They now have their own 1,000 acre range unit, as well as some irrigated land for raising winter feed.

In addition to the agricultural agent, Warm Springs Extension employs a program assistant (a tribal member), who has the responsibility of working directly with the ranchers to ensure that range management programs are put into practice at the grass-roots level, so to speak.

As the *Long Range Report* sums it up:

Extension is a people/resource related program. Its basic function is informal education working with individuals and groups to bring about a change in behavior or practice to improve how a resource is used. From individual contacts and working with committees, three over-riding goals were apparent: to protect the range resource; to reverse downward trend and improve resource base; and to improve individual/group understanding and capabilities to use the resource. ⁵³

CONCLUSION

In briefly tracing the cultural development of the Warm Springs people, the focus has been on their adoption of the horse. This animal allowed them to regain lost territory, to expand previously limited hunting area, to open up new channels of trade and interaction with other tribes, and ultimately became in and of itself a form of wealth. Today the horse remains an intrinsic element of Indian life, a symbol perhaps, but hardly an empty vestige. It is not a difficult matter to foresee that a substantial percentage of the available forage on the Warm Springs Reservation will always be utilized by horses.

Through the time honored method of trial and error, it was found that the agricultural resources of Warm Springs centered on the grazing of livestock rather than farming. Several instruments of national policy, however, came between the Indian rancher and the effective utilization of reservation resources. Specifically, the Dawes Act allowed the piecemealing of rangelands to the point where a working ranch is a rarity. "With multiple ownership, and without a system for dictating land use and control among the heirs, economic units became so fractionated as to be worthless."⁵⁴ In comparing Indian and white ranching, reasons given for inefficient use of Indian rangelands often include statements to the effect that Indians simply cannot master the managerial skills necessary for handling livestock operations, or that the communal way of doing things destroys incentive. To the contrary, a recent paper by an economist finds that "there is no negative re-

lationship between 'communal' values and efficient resource allocation," and that "land tenure or other institutional problems underlie Indian difficulties attaining the operating scale of whites in ranching."⁵⁵

A peculiar factor influencing the use of rangeland on the Warm Springs Reservation is the opportunity for employment in other economic sectors, particularly in the forest products industry. This has led to a situation whereby much of the grazing resource is consumed by hobby ranching. While this may or may not be a desirable compromise on the part of tribal members, it is a circumstance that must be considered in range management planning on the reservation.

The rangelands of the Warm Springs Reservation are an invaluable asset to the Tribes. Their worth as a multiple use resource cannot always be tangibly assessed. As William Krueger has pointed out,

Rangelands yield a variety of products and these products fall into two major categories. The first category is products of measurable economic value. The second category is products of ill-defined market value, but of recreational, aesthetic, historic, or cultural concern. The choice of management for these rangelands will depend to some degree on the desired output.⁵⁶

In the case of grazing, traditional lack of effective control of range use continues to plague efforts at managing the resource. Tribal land is treated without proper respect for its carrying capacity or potential productivity. The inevitable result is general deterioration of the range resource base.

The mechanisms are all in place for an effective range

management program to exist on the Warm Springs Reservation. An unprecedented spirit of cooperation is noticeable among all those responsible for the management of the range resource. Local leadership has been formally recognized and institutionalized in the Rideboss system. The Ridebosses have only to exercise the authority that has been invested in them by Tribal Council. This system in no way negates the responsibility for technical assistance by the Bureau of Indian Affairs. While the BIA is bound by law to follow the Code of Federal Regulations regarding grazing, a little flexibility in the interpretation of those requirements may contribute greatly to the realization of a common goal: the rehabilitation of the range. The Tribes must also work closely with BIA Realty in helping to alleviate the problems generated by the complex tenure arrangement of many reservation lands. In particular, a more careful monitoring of agricultural leases would seem a good place to start.

Tribal ordinances controlling rangeland use have largely been ignored. Many of the problems with enforcement stem from the reservation's tight-knit social fabric which precludes anonymity. In order for the system to work, the Ridebosses will have to coordinate with the Natural Resource Department in reporting infractions to the Police Department, who in turn, need to follow up reports sooner than they have in the past.

As for the livestock owners themselves, several changes in attitude, and ultimately behavior, are necessary. First of all, they must realize that the grass of the open range is a resource that belongs to *all* tribal members, not only the people who happen to have animals out there now. Management

must be conducted with the long-term interests of the Tribes in mind. Another problem contributing to inefficient range utilization is the lack of concern for their animals on the part of many livestock owners. Range Riders and the Ridebosses are expected to look after all the livestock, which is not their job. Because many owners do not depend on their operation for a living, control over livestock, hence range use, is minimal. There is the tendency to take advantage of the leadership structure, putting an uncalled for burden on the key personnel in the range management system. For the system to work, all livestock owners must assume direct responsibility for their animals.

The future of the rangelands of the Warm Springs Reservation is truly in the hands of those who make use of them. The Tribes have the capability to coordinate resource management plans and to anticipate conflicts before they take place. The updating of the Comprehensive Plan will establish clear policy guidelines for resource allocation decisions for the many kinds of uses available from the range. With tribal control comes tribal responsibility. The rehabilitation of this common resource is a concern of all tribal members; its future health depends on how it is managed today.

FOOTNOTES

- 1 Marion Clawson, "Economic Choices of Rangeland Uses," in *Proceedings of the First International Rangelands Congress* (Denver: Society for Range Management, 1978), p. 32.
- 2 William H. Hans, "The American Indian and Geographic Studies," *Annals of the Association of American Geographers*, Vol. 15 (1925), p. 86.
- 3 Donald J. Ballas, "Geography and the American Indian," *Journal of Geography*, Vol. 65 (1966), p. 156.
- 4 Alvar W. Carlson, "A Bibliography of the Geographical Literature on the American Indian, 1920 - 1971," *Professional Geographer*, Vol. 24 (1972), p. 258.
- 5 Imre Sutton, "Sovereign States and the Changing Definition of the Indian Reservation," *Geographical Review*, Vol. 66 (1976), p. 292.
- 6 Jack Hunt, "Land Tenure and Economic Development on the Warm Springs Indian Reservation," *Journal of the West*, Vol. 9 (1970).
- 7 Albert B. Lewis, "Tribes of the Columbia Valley and the Coast of Washington and Oregon," *Memoirs of the American Anthropological Association*, Vol. 1, Part 2, (1906, reprinted 1964), p. 181.
- 8 Gail M. Kelly, "Themes in Wasco Culture," *unpubl. thesis*, Reed College, 1955, p. 25.
- 9 Claudia K. Campbell, "The Subsistence of the Wasco and Tenino Prior to the Establishment of the Warm Springs Indian Reservation Through 1879," *unpubl. paper*, Oregon State University, 1980, p. 5.
- 10 John C. Ewers, *The Horse in Blackfoot Indian Culture* (Washington, D.C.: Smithsonian Institute Press, 1955, reprinted 1980), p. 2.
- 11 Francis Haines, "Where Did the Plains Indians Get Their Horses?," *American Anthropologist*, Vol. 40 (1938), p. 117.

- 12 Ewers, op. cit., footnote 10, p.7.
- 13 Angelo Anastasio, "The Southern Plateau: An Ecological Analysis of Intergroup Relations," *Northwest Anthropological Research Notes*, Vol. 6, No. 2, p. 127.
- 14 Joel V. Berreman, "Tribal Distribution in Oregon," *Memoirs of the American Anthropological Association*, No. 47 (1937), p. 51.
- 15 *ibid.*, p. 19.
- 16 Ewers, op. cit., footnote 10, p. 6.
- 17 Berreman, op. cit., footnote 14, p. 61.
- 18 Anastasio, op. cit., footnote 13, p. 128.
- 19 *ibid.*, p. 129.
- 20 *ibid.*, p. 129.
- 21 Thelma Drake Cliff, "A History of the Warm Springs Reservation 1855 - 1900," *unpubl. thesis*, University of Oregon, 1942, p. 77.
- 22 Ralph M. Shane, "Early Explorations Through Warm Springs Reservation Area," *Oregon Historical Quarterly*, Vol. 51 (1950), p. 277.
- 23 *ibid.*, p. 280.
- 24 *ibid.*, p. 280.
- 25 Anon., "A Short History of the Confederated Tribes."
- 26 Cliff, op. cit., footnote 21, p. 76.
- 27 *ibid.*, p. 79.
- 28 *ibid.*, p. 90.
- 29 Kelly, op. cit., footnote 8, p. 26.
- 30 National Archives, Records of the Oregon Superintendent of Indian Affairs, (Dec. 31, 1866).
- 31 *ibid.*
- 32 Cliff, op. cit., footnote 21, p. 82.
- 33 *ibid.*, p. 100.

- 34 *ibid.*, p. 101.
- 35 J. Orin Oliphant, *On the Cattle Ranges of the Oregon Country*, (Seattle: University of Washington Press, 1968), p. 33.
- 36 *ibid.*, p. 35.
- 37 A.E. Adams, *An Illustrated History of Central Oregon* (1904), p. 94.
- 38 Cliff, *op. cit.*, footnote 21, p. 101.
- 39 National Archives, *op. cit.*, footnote 30, (June 18, 1866).
- 40 Cliff, *op. cit.*, footnote 21, p. 93.
- 41 D. S. Otis, *The Dawes Act and the Allotment of Indian Lands*, (Norman: University of Oklahoma Press, 1973), p. 19.
- 42 Adams, *op. cit.*, footnote 37, p. 194.
- 43 Cliff, *op. cit.*, footnote 21, p. 119.
- 44 Wilcomb E. Washburn, *The Assault on Indian Tribalism: The General Allotment Law of 1887* (New York: J.P. Lippincott, 1975), p. 31.
- 45 Confederated Tribes of the Warm Springs Reservation, "Constitution and By-laws," p. 5.
- 46 *ibid.*, p. 8.
- 47 Roy Beadle, "Indians of Grande Ronde and Warm Springs Form a Partnership with the United States Government," *Indians at Work*, (May, 1940), p. 22.
- 48 William A. Galbraith and E. William Anderson, "Grazing History of the Northwest," *Journal of Range Management*, Vol. 24 (1971), p. 6.
- 49 J. P. Kinney, *Indian Forest and Range* (Washington, D.C.: Forestry Enterprises, 1950), p. 265.
- 50 U.S. Department of the Interior, *Code of Federal Regulations*, Title 25, p. 302.
- 51 *ibid.*, p. 302.
- 52 personal communication, interview with Jeff Sanders, Chief of Police, Warm Springs (June 3, 1981).

- 53 Oregon State University Cooperative Extension Service,
Warm Springs Extension Long Range Report (1980), p. 37.
- 54 William H. Kelly, "The Economic Basis of Indian Life,"
*Annals of the American Academy of Political and Social
Science*, Vol. 311 (1957), p. 76.
- 55 Ronald L. Trosper, "American Indian Relative Ranching
Efficiency," *American Economic Review*, Vol. 68 (1978),
p. 514.
- 56 William Krueger, "Range Management and Our Social Respon-
sibilities," in *Range Multiple Use Management* (Pullman,
Washington: Cooperative Extension Service, 1975), p. 153.